

CLEVELAND AREA T199-4A USER GROUPS NEWSLETTER

JANUARY, 1988

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OFFICERS	NORTHCOAST	TI-CHIPS	MEETING DATES	
PRESIDENT	MARTIN SMOLEY 1-257-1661	TERRY VACHA 225-5368	NORTHCOAST 1:30 P.M.	TI-CHIPS 10:00 A.M.
VICE PRESIDENT	RICH JOHNSON 261-9274	RUSS SHIMANDLE 1-887-5330	EUCLEDIAN ROOM	NORTH ROYALTON LIBRARY
TREASURER	JIM MEKEEL 286-3179	LIN SHAN 235-3912	EUCLED SQUARE MALL	STATE ROAD & RT 82
MEMBERSHIP	ELMO IACOBUCCI 585-2588	JOHN PARKEN 331-2830	THIRD SATURDAY	THIRD SATURDAY
	2161 Pine Ridge Drive	4172 W.217TH ST.		
	Nickliffe, OH 44092	Fairview Park, OH 44126		
SECRETARY	CHUCK POLLIN 731-6473	MARY PHILLIPS 582-4009	JANUARY 16, 1988	
LIBRARY(DISK)	ERNIE & DON NITSCHKE 888-4845	MARK McCAULEY 235-8888	FEBRUARY 20, 1988	
(TAPE)	TOM NELLIS 475-4067	JOHN PARKEN 331-2830	MARCH 19, 1988	
(MODULES)	TOM NELLIS 475-4067		APRIL 16, 1988	
			MAY 21, 1988	
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This is the time of the year when it is customary to look back to what what has happened the past year, and get out our crystal balls to see if we can glimpse the future. Thanks to all who have submitted articles for the newsletter, please keep them coming. We still have to "borrow" from others, but not as much as we used to. There are some behind-the-scenes people without whose help, you would never get a newsletter. Frank Jenkins maintains the mailing lists, prints all the labels, has the printing done and does the billing between the clubs. Tom Nellis and Bruce Young fold, staple and get the newsletter in the mail each month.

Compared to many clubs throughout the country we are holding our own. We still have a combined membership of close to 120. There seems to be a hardcore group which just can't get enough TI meetings. John Brennan must belong to every group within 75 to 100 miles of Youngstown. I won't try to name them in fear of missing one. Bill Johnson of New Philadelphia is almost as bad. We have people who are good at hardware projects and others who are doing fine programming projects and others who are faithful newsletter contributors. Still, in order to keep up the interest, we need the help of each and every member.

Several people gave me items at the last NorthCoast meeting which may have not gotten in this month. Dick Alden said he saw in a newsletter where they printed an index of the year's articles and thought it would be a good idea for us. The JUS (Johnson Space Center US) has requested something similar for a national database they are developing, so I decided to try to kill two birds with one stone. I went back two years and pulled out all the major articles which are listed herein. In going through our most recent membership lists, I saw many names that are unfamiliar to me and thought some of our newest members might be interested in these items. I had not used PRBASE for awhile and this project consumed much more time and space than I thought it

would. I will get those other items in next month.

Another way to keep groups active is through SIGS (Special Interest Groups). We tried to start one with graphics last fall and did not have too much luck. Harry Hoffman, Matt Andel and I would still like to get a group together on a regular basis. You learn neat tricks such as the one Matt has in this newsletter. Again, you are welcome to come to my house at 20311 Lake Road on Monday, January 18, at 7:00 or 7:30. There are many graphic programs available now and we could all learn more about them in such a SIG. My phone is 333-5986.

Support was requested at the NorthCoast meeting for the FREE-NET funding campaign. If you do not want to contribute as an individual, see Rich Johnson and we will send in a lump sum from the group. A note of caution...If you itemize charitable deductions on your income taxes, you will NOT get credit going through the US. We are not a charitable organization as far as the IRS is concerned. We are considered a nonprofit social organization, not charitable. So, you may want to send in your check directly. Either way, we urge your support if you are a FREE-NET user.

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EXECUTIVE NOTES - NORTHCOAST 99ers

From my point of view the December meeting was very nice. Many people helped out by bringing equipment and materials to put the meeting together, and it really took a load off me. We have quite a few people who work hard and long to keep our group running, and they deserve a great deal of thanks from all of us. The people who do demos at the meetings also deserve thanks, and one of the newest people in that group is **Ernie Malnar**. Ernie demonstrated his RAVE 99/105 keyboard which is quite powerful. With the IBM style keyboard, and the single key functions, this unit gives you the feeling of working at a much bigger machine. We had over thirty people at the meeting, which is more than I would expect for the last weekend before Christmas. We also had several people renew their membership at the meeting. Which brings me to another thought. Whether you are attending the meetings regularly or not, if it is time for you to renew your membership, please do so, and do it promptly. We need all the members we can get, and you have to admit that the newsletter alone is more than worth the fifteen dollars. Also, with all the new hardware and software which is coming out, it is definitely the wrong time to bail out on the old TI. If you have attended some of the meetings or read your newsletter from cover to cover, you realize that the TI is reaching new heights as far as freeware programs and do-it-yourself Hardware kits for expanded RAM Disk memory and increased speed. I personally get more use and enjoyment out of my TI now than I ever did before.

VOLUNTEERS NEEDED

We Need Someone To Run The Raffle

Paul Wheeler has run our raffle for the past year or more but will no longer be able to do so. He has other commitments on Saturdays and may not even be able to make the meetings for a while. The job entails handling the money from ticket sales, purchasing the items to be raffled off (at your discretion), and running the raffle at the meetings. This job can be very interesting and does not take much time or effort to carry out. If you're interested, contact me as soon as possible. We are also looking for a new chairperson to head up the membership committee. Elmo has handled this position in the past, but is apparently unable to continue. For the membership position we are looking for someone with good communication skills, a good personality and a self starter. Pay will be commensurate with your education and previous experience.

"The jobs have no pay and we'll take anyone!"

The Next NorthCoast Meeting

Ernie Mitschke will be giving the next demo. It will be on a bowling program he uses to keep track of scores, averages, and handicaps (I think). "I'm not much of a Bowler." Ernie originally used an extensive Multiplan setup to keep track of his league, but he says this program takes care of the whole job in a nutshell.

See you all at the next meeting. Marty.

Marty's Mind Dump NorthCoast 99er's 12/25/8

Many members will attest to the fact that I am always talking about the new improvements in the TI world, and I am going to give you a few more interesting tidbits. I am an advocate of RANDisks, especially the Horizon unit. I have compiled some comparison times on different Funnelweb functions. I used these because I thought they would have the most universal application for TI users.

Load time for combinations of regular Disk, RANDisk, 32K in PED (Std.), 32K in Console (Std.), and 32K in Console (On 16 bit bus).

Type of File or Program loaded.	Horizon RANDisk as Drive No. 1		Standard Disk Drive No. 1 No RANDisk used		
	32 K in Console 16 bit bus	32 K in Console 8 bit bus	32 K in Console 16 bit bus	32 K in P E Box 8 bit bus	32 K in Console 8 bit bus
FWLMB LOAD Program	7.0 s.	9.6 s.	18.4 s.	18.3 s.	18.9 s.
Load FWLMB Editor	1.1 s.	2.0 s.	13.0 s.	13.5 s.	13.4 s.
Show Directory or (SD) command of FWLMB Disk DS/SD	.9 s.	1.3 s.	8.0 s.	8.4 s.	8.9 s.
Load FWDCC/UTIL into the Editor DV/80 65 sectors	16.0 s.	20.1 s.	33.8 s.	34.8 s.	34.9 s.
Load Formatter	1.3 s.	2.1 s.	13.3 s.	14.6 s.	14.4 s.
Format FWDCC/UTIL to the same disk DV/80 84 sectors	40.6 s.	50.4 s.	90.7 s.	98.8 s.	99.6 s.

When using this table remember that I measured the times in seconds with an electronic stopwatch. Although I tried to be as accurate as possible, when you are pressing a computer key with one hand and starting and stopping a stopwatch with the other there is probably some error in timing.

My conclusion from this and some other information which I ascertained is this. If you are in need of speed and have the money, the Horizon RANDisk is a wonderful item to own. It alone makes the most significant increase in the TI's performance. If you have an extra console, twenty-seven dollars and reasonable ability with a soldering iron, the 32K memory on the high speed 16 bit bus is the next move up. The 16 bit bus kit at \$27 is not too expensive. However, installation takes some time, and some soldering must be done directly on the 9900 microprocessor. This can be tricky (I cooked one myself). Next, the high speed conversion is compatible with most software, Funnelweb, DM-1000, etc. But, some high speed copy programs, and I would imagine some Assembly language programs, will not have the proper timing to run at this speed. Therefore, you should have a spare console in its original state just for these times. This is another trick for you. I do all my editing and formatting with the RANDisk because it's so fast, but I try to keep backups on regular disks just in case I mess up the system. Here's the tip. On each storage disk use in drive one for backups, I place a one line load program which is RUN "DSK5.LOAD". When powering up the system I put any of these disks in drive one and select Extended Basic. The load program in drive one throws me to the Funnelweb load program on the RANDisk. It's fast, with no other key strokes. Good luck Marty.

EXECUTIVE NOTES - TI-CHIPS
MARY PHILLIPS

The December meeting included lots of "goodies", both for the computer and the cookie connoisseur. There were plenty of Christmas munchies on hand to sample during the meeting.

John Parken, our cassette tape librarian, has completed a catalog of the tapes he has available. He has over 391 files available for those who do not have a disk system. There is no charge for borrowing a tape.

Demonstrations were provided by several members. Terry Vacha explained the utility program called "EZ-Keys" from Asgard Software. The program provides pre-controlled functions with certain keys of the keyboard. It can be edited to redefine the keys. It appears it would be extremely versatile for programming.

Harry Hoffman showed how "TI Sings". Using the speech synthesizer and the Terminal Emulator cartridge, the computer can reproduce many songs. The words appear on screen for a sing-a-long!

For those who like to see their compositions in print, there is "Music Sheet", as demonstrated by Matt Andel. The program loads with TI Artist. Slides containing all of the symbols needed for music writing make it possible to compose a sheet of written music. This would be great for a music student.

Matt also used TI Artist and the program "Certificate99". The program provides graphics to be used when printing certificates. Matt described how he changed graphics to customize his printout even further.

Glenn Bernasek reviewed another program he has written and copyrighted. "TI Bingo" chooses numbers to be called during the course of a game and keeps track of all numbers called. Glenn reports that the program has been used by many groups for their BINGO sessions. A suggestion was made that a program to print the BINGO cards would be a great addition.

Raffled off in December was a complete package of Multiplan, donated by Mary Phillips. The lucky winner was Roberta Ferguson. Congratulations!

Please join the group for the January meeting. Possible demonstrations are "Legends" and "Robots and the TI".

MAKE YOUR OWN DATA DISK FOR CERTIFICATE99
MATT ANDEL - TI-CHIPS - CLEVELAND, OHIO

You need Certificate99 and TI-Artist to do this.

- 1) Copy the back side of Certificate99.
- 2) Use a disk manager program (DM1000) and rename the file name CDATE21 to CDATE21_P and CDATE22 to CDATE22_P.
- 3) Then load TI-Artist and choose 1) TI-Artist from the main menu. Then press S for store. Then press L to Load Picture. Now the filename is CDATE21.
- 4) Now you should see 12 little graphics. Now you will have to draw 3 lines going down between the pictures and 2 lines going across between the pictures.
- 5) Now you can erase the little graphics but not the lines you drew.

- 6) Then press FCTN Quit to return to the main menu. Then press 2) Enhancement. Then press S for slides. Press 6) to load instance. Now you can load your own instances and put them in the boxes you drew before.
- 7) When you have put your 12 instances in the boxes, press FCTN Quit to return to the main menu. Then press 1) TI-Artist. When TI-Artist comes up, get the eraser and erase the lines you drew before.
- 8) Now you can press S for store and S for save. The filename you will save it as is CDATE21, and you are finished with that file.
- 9) Now you will repeat steps 3-8, but the filename is CDATE22 and not CDATE21.
- 10) When you are done with CDATE22, you can exit TI-Artist and go back to your disk manager program and rename the file CDATE21_P to CDATE21 and the file CDATE22_P to CDATE22.
- 11) Now you can load Certificate99 and when it tells you to flip the disk around, put in the disk you just made. Your border and font choices will be the same, but the graphics will be the ones you just made.
- 12) And that's all there is to it!

SOME THOUGHTS ABOUT FAIRWARE

Deanna Sheridan - Northcoast 99ers - Cleveland, OH

The following are solely my opinions and should in no way be construed as official policy of either of the Cleveland Area user groups. These comments are prompted by the appearance of an excellent program in the US from Australia and the controversy caused because it may mistakenly have been understood to be fairware when it was not intended as such.

We have never taken an official position on freeware other than if you use it, pay for it. Some clubs around the country charge their membership \$5 to \$10 per disk of freeware and then expect them to forward contributions to the authors in addition. We have only charged \$1.00 per disk which includes the disk and it makes no matter if it is the latest and best fairware program or a bunch of so-so old basic programs. So you have no initial investment in any of the programs.

When I left the library duties at about this time last year, we had approximately 100 programs which were officially labeled fairware in our library. At the time this concept became popular, we Tiers had very little public domain software available compared to Apple, Atari, Commodore, etc., and very little prospect for commercial programs to be written for a "dead" computer. So, it seems anyone who had ever written a program thought this was a way to get it distributed and make \$\$\$\$. Well, it just didn't work out that way. It seems we downloaded the programs from CompuServe and Genie, passed them around our libraries, but didn't bother to pay for them. That was the story that ran through MICROpendium about a year ago. I loaded and at least looked at the fairware going by as I catalogued it for the library. It seemed to me that the authors who were yelling the loudest in MICROpendium had put out the poorest products. I feel that out of the over 100 so-called freeware programs

there are a dozen or less that any of us REALLY use and are of true commercial quality. Just because I might spend many hours of time developing a product, it does not mean that it is particularly useful to the general public or of commercial quality and these authors just wouldn't admit their products were not up to par.

Out of the dozen or so of really commercial-quality fairware products, there are probably only 3 or 4 that 99% of us use on a regular basis. Now that the flurry of new offerings has slowed down and you know which are your best utilities, you should still make an effort to compensate the authors. Who of us does not now (especially after V.4.0) automatically boot up with Funnelweb before we put anything else in the machine? How many times do you flip over to DM1000 without realizing it is not a Funnelweb program, but a fairware program of the Ottawa US? Who calls the bulletin boards without using either Fast-Term or MASS Transfer? Is there any other database now in use besides PRBASE? There are others which have become standards for your individual needs. If you are into assembly programming, there is probably one of the debuggers that's your favorite. Of the many cataloging programs, surely one has become your STANDARD. If you program, you probably use one of the sprite definition programs, etc. etc.

In order to make sure that we pay for these 3 or 4 programs each of us use, I would like to suggest a conscience box. Dig up one of your children's old piggy banks, or make a box with the ugliest features you can find, and sit it where you have to look at it each time you turn on your computer. When you load a fairware program you have not paid for, reach into your pocket and pull out whatever change you may have and drop it in the box. You will be surprised how soon you will have the \$5 or \$10 that the author would like to have for his program. If you don't want to send it in as an individual, give it to the treasurer of one of our groups and designate which program it is for. It shouldn't be very long before you can remove your conscience box and feel good about paying for what you are using. Ten dollars is a steal anyway for programs of the quality mentioned above. If you "upgrade" to Big Blue or one of THOSE compatibles, you will find that \$35 on up to \$100+ are the going requests over there.

P.S. This has nothing to do with fairware, but is a pet peeve of mine. I wish I had talked with Matt Andel before I put out the money recently for Joypaint99. I ordered this with Certificate99 as I understood that you could only change the Certificate99 graphics with Joypaint. Now Matt tells us we can do it with TI Artist. I do not appreciate that about every 3rd time I fire up the Joypaint program, I am greeted with a skull and crossbones and warning about pirating, especially when my total order to Great Lakes Software was headed upwards to \$100. They also said NOT to try to make a backup copy as you might damage the original. Again, I usually make it a practice NOT to buy any software I cannot backup. But, I thought a minute, and said, unless there is some way that a program writes back to the disk, it cannot hurt it. You have to read from a disk each time you use it, and you have to read to copy it. I put protect tabs on all my originals (Joypaint99, Joypaint Pal, Certificate99, etc.), got out a track copier and now have backups with my originals

tucked away. I am NOT standing out in the middle of Lake Road with copies of these programs asking everyone who goes by if they would like one. If these software companies are going to expect me to continue to purchase from them, they are going to have to treat me with the same respect they expect me to treat them. They simply do not seem to understand that those who are going to pirate and copy are going to do it no matter what protection schemes they come up with. It is a matter of what values are in a person's head, not what is on the diskette.

PICASSO PUBLISHER

Deanna Sheridan - Northcoast 99ers - Cleveland, OH

In September I read of a review of a new drawing and desktop publishing program from Australia in the LA TOPICS newsletter. It sounded just GREAT. The author of the article thought it was fairware, but Terry Masters slipped in a note that there was some question about this and they would report in the next newsletter.

In the October newsletter, there was no mention of Picasso Publisher in any regard. I then learned there were copies available here, and I immediately made arrangements to obtain one. I had hoped to do a complete review for this newsletter, but with Christmas, etc., did not have the time to put together a graphics page that would show you what it can do. Then last week, the Nov/Dec issue of LA TOPICS came and according to an article by Jim Peterson, this is not FAIRWARE and we all have illegal copies of this program.

According to Mr. Peterson, the author, Arto Heino, "mistakenly" told someone it was fairware. It was uploaded to Genie and has taken the country by storm. Supposedly because it says it is copyrighted, we all should have known that it was not fairware. Well, I have gotten a lot of fairware that have copyright symbols on it. This is because there is so much confusion as to what a copyright actually does. Some think that it keeps it from being copied without your specific permission. Others feel that it simply keeps someone else from taking your work and putting their name on it and selling it. I am not clear myself on the specifics, but do know that simply having a copyright would not flag it for me as a commercial program. The documentation is brief and at the end the author says he is asking \$20.00 plus \$2.50 S&H. I took it to be fairware simply by the presentation.

Next month I would like to review it in detail. It has all the best features of ALL the graphics programs we have to date combined into one. There are a couple of features I wish it had also. I wish I could tell you that I have already put my \$22.50 in the mail to Mr. Heino, but I have been so busy I have not. I hope it will have been accomplished by the time you get this newsletter. I sometimes correspond with other newsletter editors, and one recently told me that the version I have (1.1) is indeed a fairware program and that there is a version 2.0 which is commercial. Depending on the mail between here and Australia, I hope to have an answer by the January meetings. If you are into graphics and desktop publishing, you HAVE to have this program. I understand that Mr. Heino is unemployed and wrote this program as a way to get some

income. So, PLEASE, if you come across Picasso Publisher and use it, send your money to Mr. Meino. It is worth every penny.

4TH PLOT

Paul Newmeyer - NorthCoast 99ers - Cleveland, OH

This article will introduce you to an intriguing Forth disk called 4thPLOT.

To produce this disk, I lifted 2 programs from our Club's set of 10, put menu screens to them, BSAVED the necessary Forth system options, and behold--a nice utility disk to enjoy. Running the program is now much easier than before.

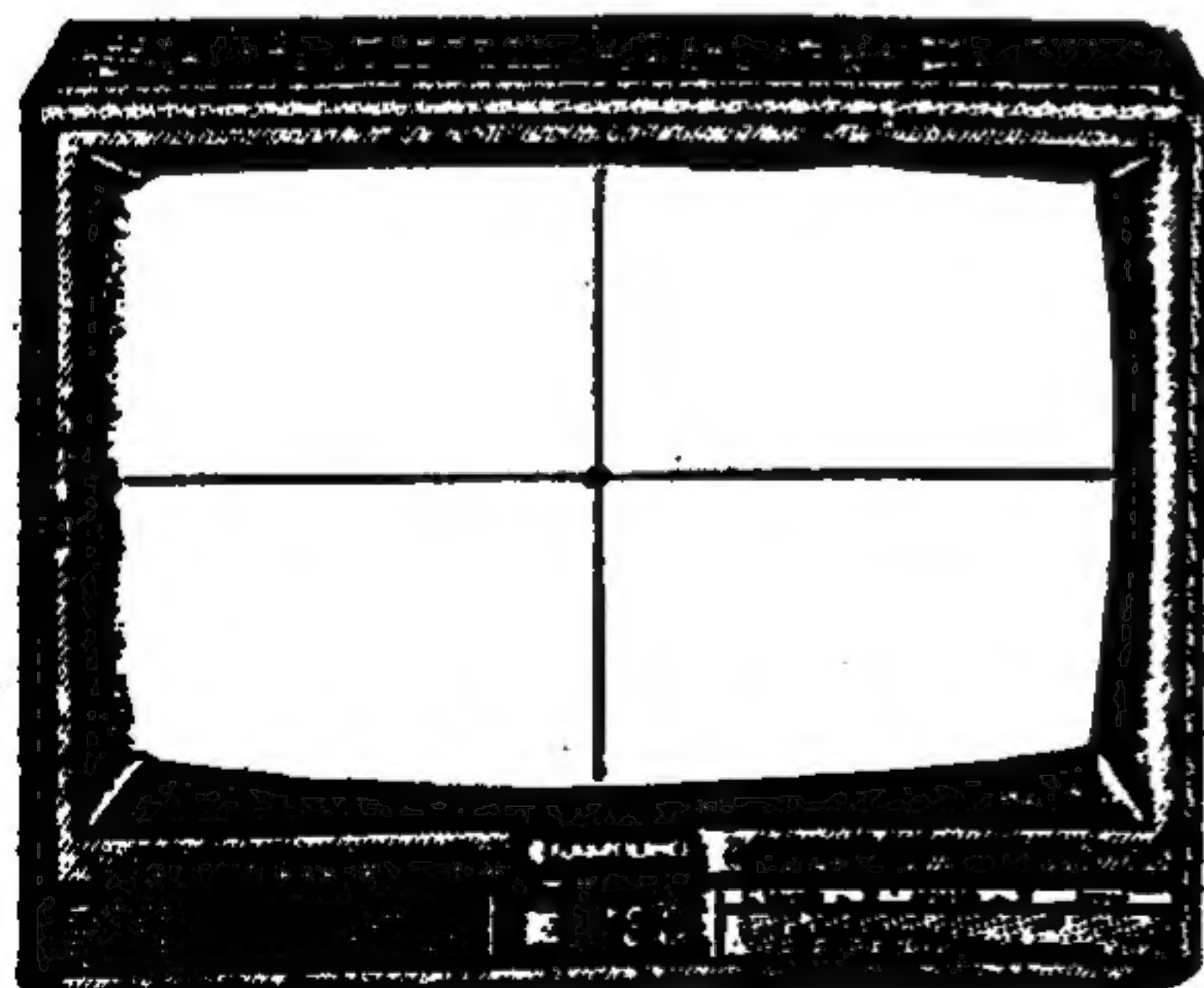
You can run your choice of seven Demos and simply watch circles, arcs, epicycloids, hypocycloids, and kaleidoscopes do their tricks. Or, you can plot all these functions and do your own drawing.

Another application consists in enabling you to learn something about Forth's powerful graphic commands, and still have fun doing it. Advanced Forth users can further develop these features to do graphics, produce bar and pie charts, etc.

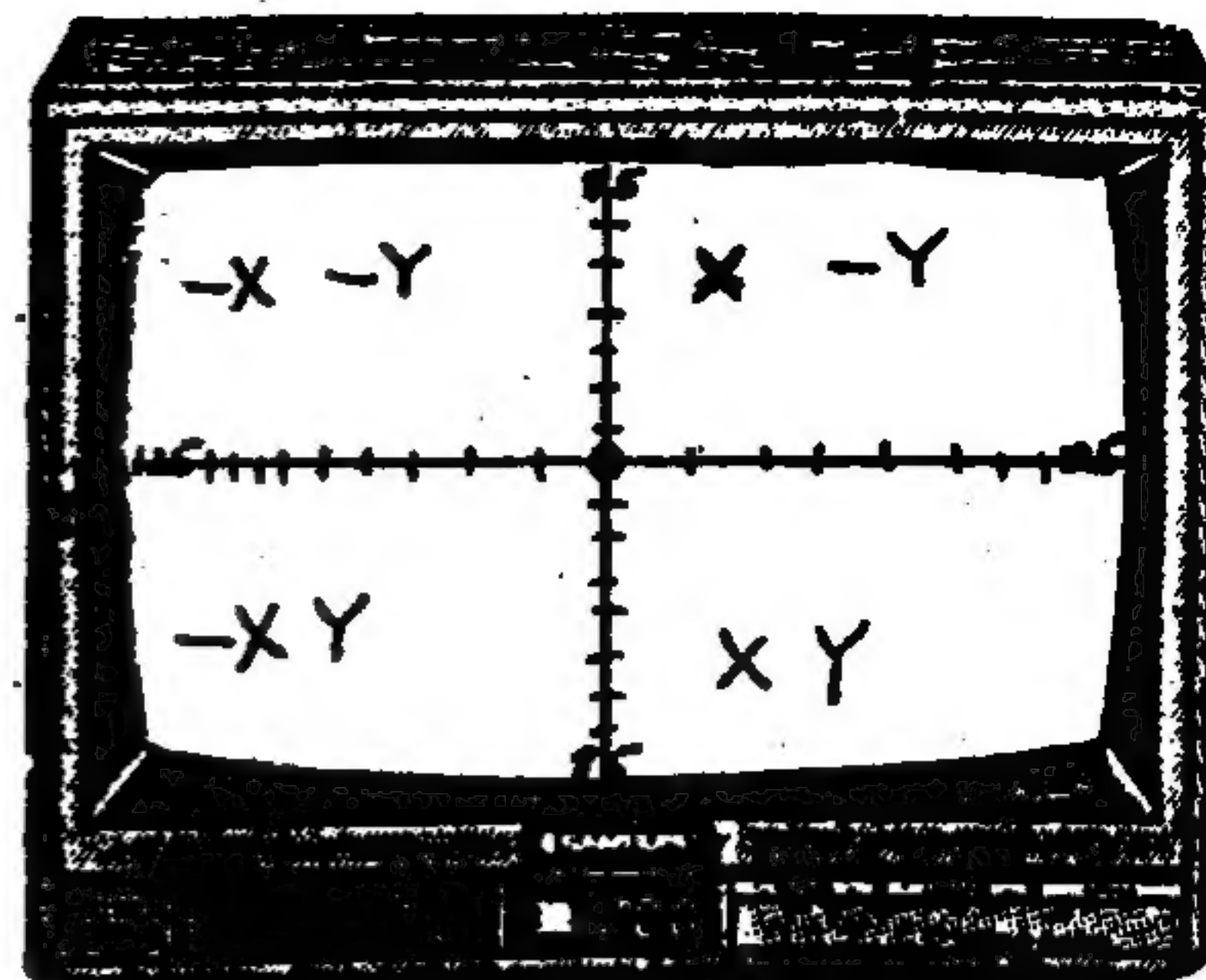
Loading the program requires using the E/A, option 3. Then enter "Dskx.Forth." Or, from XB, use the Funnelweb, V 4.0. Select the Forth loader option and follow instructions on the screen.

The main program, Grid-Plot, designed by Gene Thomas, will load in. I am unsure of the author of the second program.

Grid-Plot will enable you to draw a grid plotted screen. As an aid, I use a sheet of graph paper on which I have drawn a top to bottom and side to side line intersecting the center. It looks something like this:



I have calibrated the grid in the following fashions:



Zero is the center--0 to 85 from the center to top--0 to 85 from center to bottom--0 to 125 from the center to left--0 to 125 from center to right.

The upper left quadrant is plotted $-x -y$. The upper right quadrant is plotted $x -y$. The lower left quadrant is plotted $-x y$. The lower right quadrant is plotted $x y$.

x =column. y =row.

Now, let's consider a practical example. Let's draw a circle in the center of the screen. On the HELP screen, you will notice that the formula for a circle is $x y \text{ rad CIRCLE}$. First, enter RESET to enter a split screen mode. Then enter 0 -30 50 CIRCLE. A big circle will draw on the screen. You could have entered 0 30 30 CIRCLE, or 0 30 20 CIRCLE, or 0 30 5 CIRCLE, or 0 30 2 CIRCLE. All of these will draw different sized circles.

Let's try something else. Put the same sized circle in each quadrant. For the upper left quadrant enter -80 -40 20 CIRCLE. For the upper right quadrant enter 80 -40 20 CIRCLE. For the lower left quadrant enter -80 40 20 CIRCLE. And for the lower right quadrant enter 80 40 20 CIRCLE.

We could make this a little more interesting, by entering multiple commands. First, enter CLEAN to erase the blackboard. Then enter -80 -40 20 CIRCLE -84 -44 20 CIRCLE -8 -48 20 CIRCLE -92 -52 20 CIRCLE. Four overlapping circles will draw in the upper left quadrant. Try this one: 0 -30 50 CIRCLE 0 -30 40 CIRCLE 0 -30 30 CIRCLE 0 -30 20 CIRCLE. Four circles will draw, one inside the other.

Try some spokes: -10 0 15 25 SPOKES. Here's a polycycloid: -10 0 15 5 POLY. Draw an epicycloid: -10 0 15 50 EPICYC; -10 0 10 40 EPICYC; -10 0 6 36 EPICYC; -10 0 4 34 EPICYC; -10 0 2 32 EPICYC. Make a line: -30 0 30 0 LINE, and intersect it: 0 -30 0 -30 LINE.

Play with this program, and I'm sure you'll like it.

The second program is similar, although not as sophisticated. However, it has the additional feature of being able to draw an ever-changing kaleidoscopic circle.

If you would like a copy of this disk, let me know and I'll send you one for an exchange of a disk plus postage, or pick one up from me at a club meeting.

NOTE: Paul had one of his FORTH columns published in the Nov/Dec issue of the LA TOPICS.

SOME COMMENTS ON ULGEN'S TI SURVEY
Deanna Sheridan - NorthCoast 99ers

Ali Ulgen, a member of the NorthCoast 99ers in Cleveland, Ohio, decided last spring he would like to know what other Tiers around the country are doing with their machines, what they would like to do, and what they would like to have for them. He developed a survey form and started contacting user groups. If he knew then what he knows now, he would probably never taken on this project.

I have talked with Ali several times over the past few months and he has shared his frustrations with me. Through a variety of sources, he finally contacted 220 US user groups and 34 foreign. When he started, he had hoped to have 2000 Tiers respond. He later dropped that to 1000 and ended up with 753. Of the 254 groups (USA and foreign), 73 responded. It was a great disappointment to him that some of the larger groups refused to distribute the survey to their members saying they did their own. He was accused of being a front for a commercial hardware or software vendor (false), or that he would be selling the data to a commercial hardware or software firm. None of these accusations are true. He is simply an avid Tier who wanted to get a picture of the TI world. He has several TI systems and the new GENEVE.

He feels the TI would never have lasted this long after TI dumped us if it were not for the User Groups. However, he feels that the groups should quit feeling they have to compete with each other and start helping each other. (My pet peeve is user groups "selling" public domain software to other groups. Makes me cringe.)

However, Ali made many new friends the past few months and found several groups who went the extra mile to cooperate with him. He tells you all about it in a file called SurveyT on the disk which I will place in the library. It takes up 6 full pages of text which you should find very interesting. This disk also contains the survey which we are publishing in its entirety below. Yet to come is another file which will detail information about individual clubs, how he contacted them, etc. I know that he spent many hours of time, plus several hundred dollars in phone calls and time on The Source. I might mention that even though he had hoped to have over 1000 surveys, he said that the percentages changed ever so slightly after the first 500 that he feels the picture would not have changed significantly with additional responses. After all, the Neilsons use only 1200 families to chart the television viewing habits of several million people! I am sure that Ali would love to hear from you with your comments. If nothing else, send a postcard that you read the survey and any comments so that he can get some feedback from a project that consumed almost half a year of his life. He is receiving no monetary benefits, so at least give him a pat on the back!!

TISURVEY87 - DEC. 15 1987

A1 WHAT IS YOUR SEX?

MALE 650 86.3214%

	FEMALE	103	13.6786%
A4	WHAT IS YOUR AGE GROUP?		
	17 OR UNDER	23	3.0544%
	18 - 24	28	3.7185%
	25 - 34	114	15.1394%
	35 - 44	249	33.0677%
	45 AND OVER	339	45.0199%
A10	HOW MANY YEARS OF EDUCATION?		
	11 OR LESS	39	5.1793%
	12 YEARS (hi school)	155	20.5843%
	13 - 15	291	38.6454%
	16 YEARS	108	14.3426%
	17 AND OVER	160	21.2483%
A16	YOUR OCCUPATION?		
	STUDENT	32	4.2497%
	BLUE COLLAR (homemaker)	187	24.8340%
	WHITE COLLAR	137	18.1939%
	PROFESSIONAL (self-emp)	246	32.6693%
	RETIRED	151	20.0531%
A22	DO YOU USE A COMPUTER AT WORK?		
	YES (or school)	439	58.3001%
	NO	314	41.6999%
A25	WHICH BRAND of computer at work?		
	N/A	307	40.7703%
	IBM	182	24.1700%
	APPLE	24	3.1873%
	DEC	27	3.5857%
	SPERRY (unisys)	17	2.2576%
	NEC	4	0.5312%
	UNKNOWN	9	1.1952%
	OTHER	183	24.3028%
	(wang,ti,itt,hp)		
A34	HOW MANY TI994 OR 4As DO YOU OWN?		
	1	236	31.3413%
	2	369	49.0040%
	3 OR MORE	148	19.6547%
A38	HOW MANY PE SYSTEMS DO YOU OWN?		
	0	114	15.1394%
	1	472	62.6826%
	2	136	18.0611%
	3 OR MORE	31	4.1169%
A43	WHICH MEMORY EXPANSION DO YOU HAVE?		
	NONE	56	7.4369%
	TI	458	60.8234%
	CORCOMP	80	10.6242%
	FOUNDATION	24	3.1873%
	HYARC	63	8.3665%
	MECHATRONIC	4	0.5312%
	OTHER (horizon, consi32)	68	9.0305%
	tachyon,ucomp,doryl		
A51	WHAT SIZE memory?		
	N/A	54	7.1713%
	32K	543	72.1116%
	128K (104K)	42	5.5777%
	256K (192K)	28	3.7185%
	512K (640K)	78	10.3586%
	1024K	8	1.0624%

A58	WHICH DISK CONTROLLER CARD DO YOU OWN?		
	NONE	71	9.4290%
	TI	420	55.7769%
	FOUNDATION (?)	2	0.2656%
	HYARC	53	7.0385%
	CORCOMP	187	24.8340%
	OTHER (percoa,ics)	20	2.6560%
A65	HOW MANY 5-1/4" DISK DRIVES DO YOU OWN?		
	NONE	77	10.2258%
	1	167	22.1780%
	2	307	40.7703%
	3 OR MORE	202	26.8260%
A70	CONFIGURATION (disk drives)?		
	N/A	79	10.4914%
	SS/SD	265	35.1926%
	DS/SD	158	20.9827%
	DS/DD	235	31.2085%
	DS/DD	16	2.1248%
A76	DO YOU OWN A HARD DISK SYSTEM?		
	YES	16	2.1248%
	NO	737	97.8752%
A79	WHATS THE SIZE?		
	N/A	734	97.4768%
	10 MEG OR LESS	8	1.0624%
	20 MEG (11 TO 29)	10	1.3280%
	30 MEG OR MORE	1	0.1328%
A84	DO YOU OWN A MODEM?		
	YES	524	69.5883%
	NO	229	30.4117%
A87	INDICATE HIGHEST BAUD RATE?		
	N/A	227	30.1461%
	300	291	38.6454%
	1200	224	29.7477%
	2400	11	1.4608%
A92	WHICH PRINTER DO YOU OWN?		
	N/A	74	9.8274%
	TI (includes thermal)	71	9.4290%
	EPSON	149	19.7875%
	PRINTR/NEC (leadEdge)	39	5.1793%
	OKIDA/C IYON (microIn)	38	5.0465%
	STAR MICRONIC (gemini)	187	24.8340%
	CONREX/TOSHIBA	3	0.3984%
	BROTHER/CANNON	10	1.3280%
	JUKI/CITIZEN	18	2.3904%
	OTHER (panasonic,ids,api)	164	21.7795%
A103	DO YOU OWN A MONITOR?		
	YES	455	60.4250%
	NO	298	39.5750%
A106	ARE YOU USING A TV?		
	YES	399	52.9880%
	NO	354	47.0120%
A109	WHICH MONITOR BRAND?		
	N/A	290	38.5126%
	TI	117	15.5378%
	ANDEK	32	4.2497%
	SANYO/TAXAN	28	3.7185%
	NEC	32	4.2497%

	TATUNG/SAMSUNG	13	1.7264%
	MAGNAVOX/SONY	51	6.7729%
	EPSON/PRINSON	7	0.9296%
	HITACHI	5	0.6640%
	OTHER (bac,condr,pansnc)	178	23.6388%
A120	IS YOUR MONITOR?		
	N/A	305	40.5046%
	RGB	65	8.6321%
	RGB/COMPOSITE	291	38.6454%
	MONOCHROME	92	12.2178%
A125	DO YOU HAVE THE GRAM KRACKER?		
	YES	82	10.8898%
	NO	671	89.1102%
A128	HOW MANY SOFTWARE CARTRIDGES (MODULES) DO YOU OWN (INCLD CASSETTE)		
	9 OR LESS (inclds 0)	131	17.3971%
	10 TO 24	319	42.3639%
	25 OR MORE	303	40.2390%
A132	HOW MANY SOFTWARE DISKS DO YOU OWN?		
	9 OR LESS (inclds 0)	118	15.6707%
	10 TO 24	124	16.4675%
	25 OR MORE	511	67.8619%
A136	HOW DO YOU USE YOUR TI?		
	ENTERTAINMENT	290	38.5126%
	BUSINESS (wrd proces)	137	18.1939%
	EDUCATION	125	16.6003%
	PROGRAMMING	201	26.6932%
A141	PROGRAMMERS; WHAT DO YOU PROGRAM IN?		
	N/A	200	26.5604%
	BASIC	69	9.1633%
	XBASIC	364	48.3400%
	ASSEMBLY	68	9.0305%
	FORTH	20	2.6560%
	C	25	3.3201%
	OTHER (logo,pascal)	7	0.9296%
A149	EVER WRITE A COMMERCIAL PROGRAM FOR TI? (INCLUDE FREEMWARE)		
	YES	89	11.8194%
	NO	664	88.1806%
A152	IN WHAT LANGUAGE?		
	N/A	657	87.2510%
	BASIC	12	1.5936%
	XBASIC	54	7.1713%
	ASSEMBLY	17	2.2576%
	FORTH	6	0.7968%
	C	5	0.6640%
	OTHER (pascal)	2	0.2656%
A160	DO OTHERS USE YOUR TI?		
	YES	516	68.5259%
	NO	237	31.4741%
A163	HOW MANY OTHERS?		
	N/A	235	31.2085%
	1	184	24.4356%
	2	217	28.8181%
	3 OR MORE	117	15.5378%
A168	DO YOU OWN ANY OTHER BRAND OF COMPUTER?		
	YES	209	27.7556%

NO	544	72.2444%
A171 IF SO WHICH BRAND?		
N/A	540	71.7131%
IBM	60	7.9681%
APPLE	18	2.3904%
COMMODORE	48	6.3745%
ATARI	19	2.5232%
OTHER (tandy, hp, timex)	68	9.0305%
A178 APPROXIMATELY HOW MANY HOURS PER WEEK		
DO YOU USE YOUR T1?		
4 OR LESS	230	30.5445%
5 TO 9	257	34.1301%
10 TO 14	117	15.5378%
15 OR MORE	149	19.7875%
A183 ARE YOU A MEMBER OF A USERS GROUP?		
YES	717	95.2191%
NO	36	4.7809%
A186 HOW MANY MEMBERS?		
N/A	36	4.7809%
33 OR LESS	282	37.4502%
34 TO 49	209	27.7556%
50 TO 74	106	14.0770%
75 TO 99	67	8.8977%
100 TO 150	28	3.7185%
151 TO 199	14	1.8592%
200 OR MORE	11	1.4608%
A195 ARE YOU MEMBER OF COMMERCIAL NETWORK?		
YES	248	32.9349%
NO	505	67.0651%
A198 WHICH ONE?		
N/A	507	67.3307%
COMPUERVE	117	15.5378%
SOURCE	31	4.1169%
GENIE	56	7.4369%
OTHER (delphi, franet, plink)	42	5.5777%
A204 HOW MUCH IN DOLLARS DO YOU USE IT PER MONTH?		
N/A	501	66.5339%
29 OR LESS	150	19.9203%
30 TO 49	76	10.0930%
50 TO 74	17	2.2576%
75 TO 99	6	0.7968%
100 OR MORE	3	0.3984%
A211 DO YOU PLAN TO PURCHASE (OR HAVE) THE HYARC 9640?		
YES	226	30.0133%
NO	527	69.9867%
A214 WHAT SOFTWARE AREA YOU WOULD LIKE FOR THE 9640?		
N/A	340	45.1527%
CAD/GRAPHICS	69	9.1633%
DESK TOP PUBLISHING	118	15.6707%
DATA BASE MANAGER	137	18.1939%
WORD PROC/SPREADSHEET	70	9.2961%
TRUE BASIC	7	0.9296%
ASSEMBLY LANGUAGE	11	1.4608%
C LANGUAGE	1	0.1328%
OTHER LANG	0	0.0000%

A224 WHAT ABOUT HARDWARE FOR THE 9640?		
N/A	335	44.4887%
APPLE COMPATIBILITY	17	2.2576%
IBM COMPATIBILITY	171	22.7092%
RGB MONITOR	43	5.7105%
3.5" MICRO DISK	66	8.7649%
CD ROM	16	2.1248%
SPEECH RECOGNITION	9	1.1952%
INTERNAL MODEM (intelgnt) 96		12.7490%
A233 DO YOU PLAN TO PURCHASE (OR HAVE) TRITONS TURBO XT?		
YES	43	5.7105%
NO	710	94.2895%
A236 HOW MANY EXTRAS DID YOU BUY WITH THE TURBO-XT?		
N/A	733	97.3440%
1	10	1.3280%
2	5	0.6640%
3	4	0.5312%
4	1	0.1328%
5	0	0.0000%
6	0	0.0000%
A244 WOULD YOU LIKE AN AT UPDATE FOR THE TURBO-XT?		
YES	177	23.5060%
NO	576	76.4940%
A247 HAVE YOU PLANS TO PURCHASE CARDS BY OTHER VENDORS?		
YES	272	36.1222%
NO	481	63.8778%
A250 DO YOU PLAN TO PURCHASE (OR HAVE) RAVES KEYBOARD?		
YES	107	14.2098%
NO	646	85.7902%
A253 DO YOU PLAN TO PURCHASE (OR HAVE) A MOUSE?		
YES	246	32.6893%
NO	507	67.3307%
A256 DO YOU SUBSCRIBE TO MICROPENDIUM?		
YES	420	55.7769%
NO	333	44.2231%
A259 DO YOU SUBSCRIBE TO SMART PROGRAMMER?		
YES	125	16.6003%
NO	628	83.3997%
A262 DO YOU SUBSCRIBE TO COMPUTER SHOPPER?		
YES	249	33.0677%
NO	504	66.9323%
A265 DO YOU SUBSCRIBE TO GENIAL TRAVELLER?		
YES	107	14.2098%
NO	646	85.7902%
A268 DO YOU SUBSCRIBE TO U6 PUBLICATIONS?		
YES	308	40.9031%
NO	445	59.0969%
A271 WHAT IS YOUR OPINION OF THIS SURVEY?		
VERY POOR	14	1.8592%
POOR	27	3.5857%
OKAY	307	40.7703%
GOOD	284	37.7158%
VERY GOOD	121	16.0691%
ULGEN 952 E. PARKHAVEN DR. SEVEN HILLS OH.		
44131-3918 (216)741-4951		

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TITLE	DATE	DESCRIPTION
132 PRINT	02 86	an XD program to print 2 two-column typefiles side-by-side. Good for parts lists, catalog lists, sp
132 PRINT-3	06 86	An updated version of 132 print designed to print two files of column materials side by side such as
300 BAUD OVER 1200?	05 87	Some advantages of using 300 baud over 1200 at certain times on CompuServe
32K ON 16BIT BUS	11 87	How to install 32k memory on the 16 bit high-speed bus
98-CENT RLE DIGITIZER	05 87	A zany method of producing RLE-type pictures with wax paper and lots of patience.
AMAZING ASK-KEY FILE	06 87	The Many ways ASCII files can be manipulated from various programs for other purposes or printing
ART WITH TI-WRITER	05 87	How to use TI-Writer to print original art or TI-Writer instances.
ASGARD'S LEGENDS	12 87	Review of Legends
BA WRITER/FUNLWRITER	06 86	Comparison between BA WRiter and FUNLWRITER
BACK TO BASIC	10 87	Basic programming tutorial
BASIC BASICS	10 86	A Basic tutorial on strings entitles What's on a string?"
BASIC LOGIC	04 86	A tutorial on the logical process of developing a basic program with examples
BASIC OF PROGRAMMING	07 87	Basic programming techniques
BASIC PROGRAMMING	12 86	Short routines to display things on the screen where you want them.
BLANK SCREEN?	10 87	Report on power cord failure
CALL WAITING	10 87	How to disable Call Waiting when using modem
CARE OF DISK DRIVES	10 86	How to best utilize your disk drives and take care of them.
CASSETTE LOADER	12 87	How to obtain and use the high-speed cassette loader
CHAIN LINK	12 87	Review of the solitaire type program Chainlink
CHECKBOOK WRITER	03 87	Review of freeware program Checkbook Writer
CHRISTMAS CROSSWORD	10 87	Program listing and explanation of Christmas Crossword
CLEVELAND FREE-NET	11 86	Announcement of Cleveland Free-NET, a free telecommunications network for all computer users.
COLD FORTH GAMING	03 87	Review of Games within the NorthCoast Forth library
COMPONENT LAYOUT	01 87	Schematic of general component layout of TI console
COMPUTE'S TI COLLEC	08 86	Review of the Compute! publication's book, Computer's TI Collection - Volume 2.
COMPUTER CENTER	07 86	Plans to build a computer work center from a single sheet of plywood.
COMPUTER WAR	06 86	Review of the game COMPUTER WAR.
CONVERT AS TO PRGRM	03 86	Tutorial on converting option 3 E/A programs to option 5 E/A programs.
CONVERTING TO PRBASE	11 86	How to convert files from other Databases to PRBASE
CRACKING THE 99/4A	05 86	Review of the Book "Cracking the 99/4A"
CREATIVE FILING	10 86	Review of Creative Filing System with comparison to PRBASE
CSGD GRAPHICS	10 87	A graphic printout of CSGD designs prepared by Deanna Sheridan, NC 99ers
CSGD III	02 87	Review of the CSGD III software package
CSGD UD 3&6	07 87	Announcement of a program to catalog CSGD graphics and fonts with printouts and 2 new user disks
D&D CHARACTERS	06 86	Dave Talan announced the release of a program to develop characters for Dungeons and Dragons. 19831
DATA DISKS/PRBASE	11 87	Announcement of data disks for Address-phone-date and Investment data from Jim Mekeel, 11596 Forest
DESIGNER LABELS	11 87	Review of Designer Labels program
DESKTOP PUBLISHING	06 87	Examples of desktop publishing using the Ann Dhein Art Convert Program for fonts and graphics.
DIAGRAMS	07 87	Wiring diagrams and pin positions for the TI console
DISK COPIER	07 87	Announcement concerning the new module by CorComp to copy TI and IBM disks back and forth
DISK DRIVES	08 86	Some points to check if your disk drive is misbehaving
DISK HELPER 1	03 87	Announcement by Jim Mekeel of a new version 2.0 of Disk Helper1.
DISK LIBRARY CATALOG	04 86	Review of Master Catalog by Mark McCormack, Catlib by Marty Kroll and The Director by Ron Rutledge
DISKHELPER1	04 86	Release of fairware program Diskhelper 1 by Jim Mekeel of NC 99ers, 111596 Forest View, Nunson, OH 4
ENHANCED DISPLAY	12 87	Review of Enhanced Display Package programming utility
EPSON PRINthead	05 87	How to clean the printhead on the Epson printer.
ERROR CODE LISTING	07 86	Listing of all known error codes for various TI functions.
EXCHANGE RATES	07 87	Latest exchanges rate for TI Equipment from their repair center in Texas
FAST-TERM COMMANDS	03 87	A listing of the commands used in Fast-Term
FAST-TERM & LOG FILE	06 87	Logging files to disk with Fast-Term
FIXING BLOWN DISKS	07 86	How to fix blown disks with a sector editor.
FONT WRITER	04 87	REVIEW of Fontwriter by Bonnie Snyder
FONT WRITER	04 87	Review of the first version of Fontwriter
FONT WRITER II	11 87	Review of FontWriter II

FOOLPROOFING BASIC	08	86	Tutorial on basic programming and extended basic with error-trapping routines.
FORTH DISKS	01	87	Overview of 10 Forth Disks placed in library
FORTH FOR FUN	11	87	Paul Newmeyer extolls the Forth Language and tries to get others interested
FORTH SCR 85	08	86	The same program written in XBasic, Forth, and c99
FORTH UTILITIES	04	87	Review of the various Forth utilities in the Forth library
FORTHFONT	10	87	How to use FORTHFONT to create fonts for mailing labels
FREE-NET DOWNLOADING	06	87	Downloading ASCII files from FREE-NET and converting to programs
FREEMARE HINTS	03	87	Suggestions for those requesting fairware programs from authors.
FUNNELWEB FARM 1	07	87	The first in a set of tutorials from Funnelweb Farm
FUNNELWEB LETTER	12	87	Letter from McGovern with transmittal of Funnelweb 4.0
FUNNELWEB OVERVIEW	12	87	Listing of some of the enhancements to version 4.0
FUNNELWEB LOAD	05	87	How to use the Funnelweb Load program on version 3.4
FUNNELWEB LETTER	10	87	Letter Thanking the Cleveland groups for contribution
FUNNELWEB 3.4	01	87	Review of Funnelweb 3.4
GENIAL TRAVELER	12	87	An introduction to Genial Traveler and subscription form
GENIE NETWORK	05	87	How to use GENie telecommunications network.
GET THE GOLD	10	87	Tips for winning GET THE GOLD revised by Glenn Bernasek
GETTING ON-LINE	03	87	How to get started in telecommunications
6K UTILITY 1	01	87	Review of 6K Utility 1
GRAM PACKER	02	87	Review of the Gram Kracker Utility - GRAM PACKER - Part 1
GRAM PACKER 2	03	87	Part 2 of the review of the Gram Packer, a utility for the GramKracker
GRAM PACKER III	04	87	More on how to use the Gram Packer, a utility for the Gram Kracker
GRAMULATOR	12	87	Announcement of a new GramKracker type device for the TI
GREAT VIDEO CAPER	10	87	Help if you have problems with video modulator
HARDCOPY LIBRARY	02	87	A Partial listing of the contents of the Northcoast hard disk library
HARDCOVER LIBRARY	05	87	More descriptions of the material in the hardcover library of the Northcoast 99ers.
HI-SPEED CASSETTE LD	01	87	How to use Clyde Colladge's Hi-Speed Cassette Loader. Need 32K inside console.
HOME CONTROL 99	04	87	Review of the software program Home Control 99 by Paul Wheeler, 1269 E. 348th St., Eastlake, OH 4409
HOME CONTROL 99	10	87	What other User Groups are saying about Home Control 99
HORIZON COMPUTER	11	87	How to get new 1 mg RANDISK from Bud Mills and report of good service of Horizon people
HORIZON RANDISK	05	86	Review of Horizon RANDISK and details of installing and using
HORIZON RAM DISK	03	86	Review of Horizon randisk from one of the first users.
HRD EXPANSION	12	86	How to expand a Horizon Ram Disk to 256K.
IBM CLONE?	02	87	Reasons why you may or may not want to "upgrade" to another computer.
IBM PRINT	01	86	Review of IBM Print. A utility to print Household Budget Management Files.
IMPACT-99	03	87	An article on Jia Peterson and his contribution to the TI world
IMPROVED VIDEO	07	87	How to improve video reception with replacement of a new resistor
J.PETER HODDIE	07	87	A report by Hoddie to BCS mostly detailing status of GENEVE computer and DOS
KBM/99 KEYBOARD	12	87	Review of the KBM interface for an IBM style keyboard.
LEGENDS	06	87	Review of the adventure game Legends
LETTER FROM PAOLO	11	87	A letter from Paolo Bagnaresi of the latest TI developments in Italy
LOADER	04	86	A ten-sector loader program with optional catalog printout
LOADING PROGRAMS	06	87	How to determine types of programs and methods of running them
MENU V6.0	10	87	Review of Menu v6.0 for use with Horizon Randisk
MICRO PINBALL II	06	86	Review of the game MICRO PINBALL II
MINI PE BOX	08	86	Description for making a mini PEB box from a disk drive enclosure.
MINIWRITER TECHNIQUES	12	87	How to use 40-column screen format and double-column newsletter printing with Miniwriter II and II+
MODULAR PROGRAMMING	07	87	Tips for modular programming in basic
MODULATOR MODIFICATION	02	87	Installing a 75-ohm source on the TI RF modulator for better video.
MS LABELS	03	86	A labeler program with several options for print size.
MS MAILERS	05	86	A program to print a mailer with sender and return address. Fold over cardboard and mail diskette.
MULTIPLAN MACHINATIONS	04	87	A tutorial for building SLYK files for Multiplan
MULTIPLE PRINTING	11	87	A routine by Tom Wynne for printing multiple copies of graphics from various programs.
MUSIC CORNER	03	86	Using data statements to key in call sound statements with examples
MYARC 85/DD CONTROLLER	02	87	A review of the MYARC 85/DD controller and how it operates.
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NEW ADDRESS	07	87	A new CALL PEEK utility for deleting lines
NEW FORTH DISK	07	87	Description of Forth Disk donated by Bluegrass group
NEW PRODUCTS	10	87	New products available
NUTS & BOLTS #2	05	86	Review of Jia Peterson's utility disk Nuts & Bolts #2

OBSOLETE EQUIPMENT	07	87	A humorous article about obsolete computers
OLD DARK CAVES	07	86	Review of Old Dark Caves
ORPHAN CHRONICLES	04	86	Review of the Book, Orphan Chronicles, by Ron Albright
PAOLO BAGNARESI LETTR	11	86	Interesting letter from Paolo Bagnaresi of Milan Italy on the TI in Europe.
PARENT COMES THROUGH	12	86	Review of the Software Testing System disks released to the Public Domain by TI.
PC PURSUIT	02	87	How to subscribe to PC Pursuit
PILOT 99	07	86	Review of Pilot 99 (Thomas Weithofer) version.
POWER OF THE TI	10	87	Informative article on use of TI VS. Big Blue
PRBASE ADDRESS FILE	11	87	How to modify the Address File Data Disk designed by Jim Hekeel
PRBASE 06A	01	87	Letter from William Warren answer some of Frank Jenkins questions on PRBASE.
PRBASE V.2.0	10	86	Review of PRBASE 2.0 shortly after its release.
PRE-SCAN IT!	12	86	Review of the software program Pre-Scan IT!
PRINT-IT	10	87	Review of desktop publishing program Print-IT
PRINTER COMMANDS	01	87	Listing of printer control codes for popular printers used with TI
PRK LABELS	04	87	A program for printing sailing labels from Personal Recordkeeping based on another program by Art By
PROGRAM AID	01	86	a by Jim Hekeel of the Northcoast 99ers which contains subroutines to make the screen to black while
PROGRAMMING IN C	12	86	A c99 programming tutorial
QS SOLITAIRE	03	87	Review of QS Solitaire by Quality 99 Software
QUIET PED BOX	01	87	Suggested methods for quieting PED fan.
RLE GRAPHICS	08	86	Review of MAX-RLE and capabilities to transfer to other programs
RLE PICTURES	10	87	Printout of graphics generated by Matt Andel
ROUNDING DECIMALS	12	87	How to round decimal places in XB programs
RUSSIAN ROULETTE	03	87	Program listing of Xbasic game Russian Roulette programmed by Don Nitschke
SCHEMATICS	07	87	Schematics of TI console and pinouts
SERIAL DATA TRAN.	07	87	How data is transferred
SINGLE CHIP 32K EXPA	05	87	How to install 32k inside the computer on one chip.
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SUPER SKETCH-ARTIST	07	87	How to Load Super Sketch into Ti-Artist
SUPER XB	06	87	Review of new XB module developed by Craig Miller
SUPER XBASIC	10	86	Review of Super Extended Basic and why it never caught on
SUPERBASIC	10	87	New Superbasic program written by Steve Krasek
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TALAN TIPS	01	86	Collection of tips using CALL LOADS, Adventure tips, Diskette Protection, Etc.
TELECOMM TIPS	06	87	How to use TI-Writer to send information via a modem
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THE PRINTERS APPRENT	04	87	Review of the desktop publishing program The Printers Apprentice
TI RUNNER	02	87	How to install a cheat mode in TI Runner to view and play all 50 screens
TI SINGS	07	87	Review of the software program TI-Sings
TI SUPPLIERS #1	11	87	A listing of hardware and software supplies for the TI
TI TO IBM TRANSFER	10	87	How to transfer ASCII files between TI and IBM or clone
TI VENDOR LIST 2	12	87	Second part of listing of TI software and hardware vendors
TI WRITER TIPS	11	87	Several TI Writer tips
TI-ARTIST	04	86	Review of TI-Artist
TI-ARTIST PRINT DOC	06	87	A utility to print TI-Artist instances from XB. Very slow. Good program learning tool.
TI-ARTIST FONTS	06	87	How to create fonts to TI-Artist (this was before Fontwriter came around)
TI-ARTIST IN XB	06	87	How to convert TI-Artist instances to X-Basic program files
TI-WRITER	06	86	How to use TI-Writer to develop graphs. From Allen Burt in England
TI-WRITER	08	86	Tutorial on centering odd size fonts, such as expanded, condensed, etc.
TI-WRITER	11	87	Using TI-Writer Editor as a formatter.
TI-WRITER	04	86	Some of the most commonly asked questions about TI-Writer
TI-WRITER TRICKS	01	86	CTRL U codes to access ASCII numbers above 160 with TI-Writer
TI-WRITER GRAPHICS	10	87	Example of graphics generated for TI-Writer files to intersperse with text.
TOD ADVENTURES	05	86	Part 2 of tutorial for creating Tunnels of Doom Adventures. This part is devoted to graphics.
TOD CREATOR	03	86	Tutorial on creating Tunnels of Doom adventures without the TOD editor
TRANSFER PRBASE FLES	11	87	How to transfer PRBASE data files to MS DOS files
TRANSLITERATE CMDS	05	87	Some useful transliterate commands for TI-Writer
TURBO SPEECH	08	86	How to improve the use of speech in programs using Assembly (CALL LOAD) statements.

TURBO XT	02	87	Technical specifications for Triton Turbo Xt as initially announced.
UNDERSTANDING TI DOS	07	87	Understanding the TI Disk Operating System
UNIVERSAL DISASSEMBL	02	87	Review of the Forth Based Universal Disassembler
UPGRADE?	12	87	Ron Albright debates the need to upgrade
USING MERGE FORMAT	04	87	Using the Merge Format in programming
USING YOUR NEW DISK	03	86	Tips for determining the types of programs on a disk and how to run each.
VIDEO DIGITIZER	12	87	How to create a digitizer to capture RLE type images on the TI and where to get software
WHY GRAM KRACKER?	08	86	Reasons for buying a GramKracker
X-10 POWERHOUSE	02	87	Review of X-10 powerhouse modules and controller software by CorComp
XB INSIDE CONSOLE	10	87	How to install XB cartridge inside computer
XB TO ARTIST INSTANC	06	87	A program to convert XB screens to Artist Instances (doesn't work)
XB:BUG	07	87	Review of XB:Bug written by J. Peter Hoddie and acts like DEBUG for the E/A
XBASHER	07	87	A review of XBASHER written by Mike Dodd to compact XBasic programs

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